2 Before You Start MS-DOS

- ## About Diskettes

  Caring for Diskettes
  Write-Protect Notch
  Why Copy Your MS-DOS Diskettes?
  Diskettes Need to Be Formatted

- ## What System Do You Have?

  If You Have a Two-Diskette Drive System
  If You Have a Fixed Disk Drive

- ## Files

  Naming Files
  Reserved Filenames and Extensions
  Wild Card Characters
  File Specifications

About Diskettes

This chapter introduces you to some of the important concepts and practices you must know before you start using MS-DOS. If you are unfamiliar with using a computer and diskettes, the section of this chapter **About Diskettes** must be read carefully. If you have experience with computers, the practices in this section are second nature to you. New and experienced users alike should read the **Files** section, as the information here describes the file naming rules needed to use MS-DOS.

The following sections cover the basic information you need to know about diskettes. If you are new to using computers, you should read these sections carefully.

Caring For Diskettes

Your diskettes are very valuable. They contain infor- mation and data representing hundreds of hours of work. You must take care in their handling as well as follow prudent back up and archival practices.
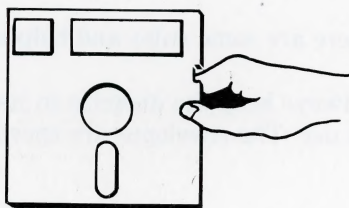
Here are some rules and helpful hints to follow.

• Always keep the diskette in its envelope when it's not in use. The envelopes are specially

treated to resist static electricity and dust
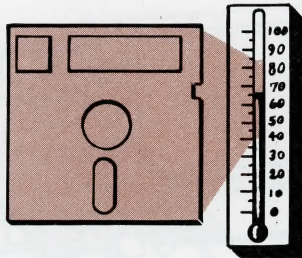accumulation.
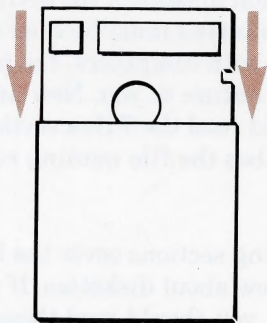
- Never touch the surface of the diskette. Handle the
 diskette by its protective cover.

• Never bend or fold a diskette.

• Store and use diskettes in a safe environment. Don't let them get too cold or too hot. Keep them out of the sun or the trunks of automobiles.

- Keep diskettes away from magnets or strong electrical fields. Keep diskettes away from your telephone. The information stored on the diskette can be damaged or erased.
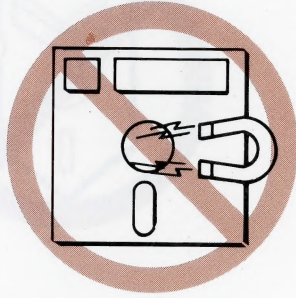
- Always be very careful when inserting the diskette into a drive. Push gently. Never force a diskette into place.
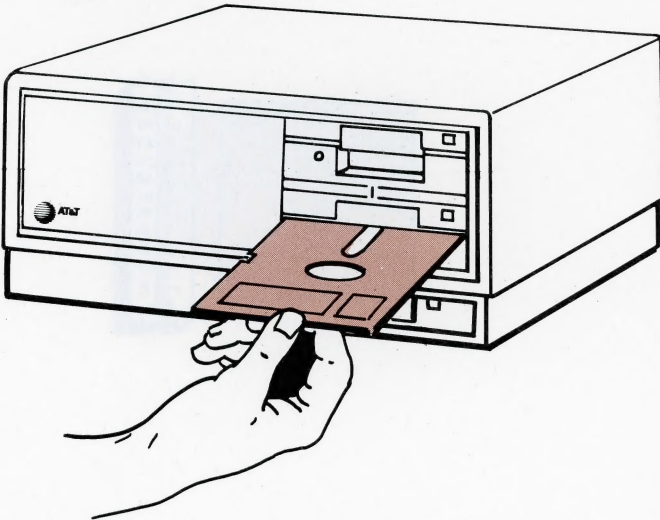
● Don't write on a diskette with a ball-point pen or pencil. Use only a soft felt-tipped marker. Better yet, prepare the diskette's label first, then apply it to the diskette.
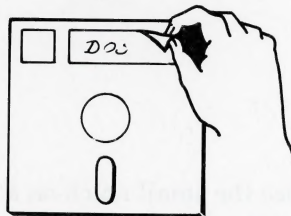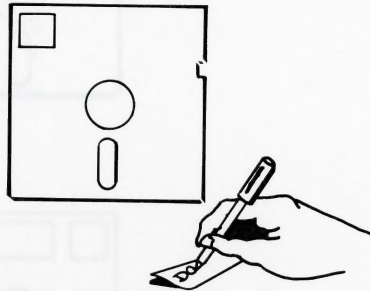
Write-Protect Notch
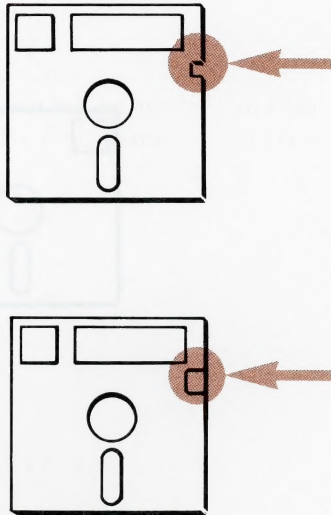
Notice the small notch on a diskette below the label on the right. This is called the write-protect notch. If you cover the write-protect notch, information can only be read from the diskette. Data already on the diskette cannot be accidentally erased or written over.

You can cover the notch with a tab supplied with the diskette or with a piece of opaque tape. You can remove the tape when you want to add or erase information.

It's a good idea to protect your important diskettes this way.

Many of the program diskettes you may buy have no notch. Such notchless diskettes are already "write-protected." The computer cannot write any information on a write-protected diskette.

Why Copy Your MS-DOS Diskettes?

Your MS-DOS Systems diskette holds all of the programs you need to make your computer operate. To protect it, make a "working" copy and save the original, or Master diskette, in a safe place. You should only use the Master diskette to make additional working copies.

This is very important.

Diskettes can be lost, physically damaged, and, on occasion, accidentally erased by sudden electrical surges in your computer or power systems. One of the first things you should do is make "backup" copies — duplicates — of your MS-DOS diskettes.

These copies become your day-to-day working copies of valuable master diskettes.

Be sure to:

- Use a felt-tip pen to label and date each backup diskette.

- Store the original or master diskettes in their paper envelopes in a safe place.

- Use the backup diskettes in your daily work.

Diskettes Need to Be Formatted

Before you can use a brand new or blank diskette with MS-DOS, you must FORMAT the diskette. You need only do this once — before you use a diskette for the first time.

FORMATing a diskette prepares it to receive and store data. Think of it this way. The FORMAT command is like putting lines on a newly paved parking lot so that cars can be parked in an orderly and efficient way. The FORMAT command writes "lines" (track and sector markers) on a new diskette. Data then is placed on the diskette in an orderly way and can be easily found and read.
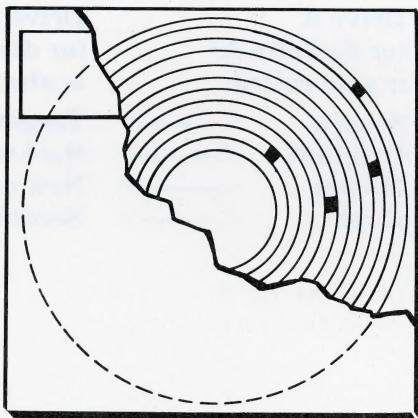
What System Do You Have?

Your computer system unit operates with either:

- two diskette drives

- a fixed (non-removable) disk and a diskette drive.

In this book you learn how to use MS-DOS with these configurations. If you have a two-diskette drive system or a fixed disk and a diskette drive, the information you need to know is in this chapter.

In our examples, we use the following conventions to distinguish between the drives in a two-drive system. These are common synonyms, used by the computer industry and by users alike.

Drive A   **Drive B**
(or diskette A)   **(or diskette B)**
is also called: **is also called:**

Source	<————>	**Target**
Original	<————>	**Backup**
Master	<————>	**New or Blank**
First	<————>	**Second**

If You Have a Two-Diskette Drive System

If you have two diskette drives, identify them as drive A (the bottom drive) and drive B (the top drive).

If MS-DOS tells you to insert a diskette into drive A and, later, a diskette into drive B, you can insert diskettes into both drives. You don't have to exchange diskettes if you have two diskette drives.
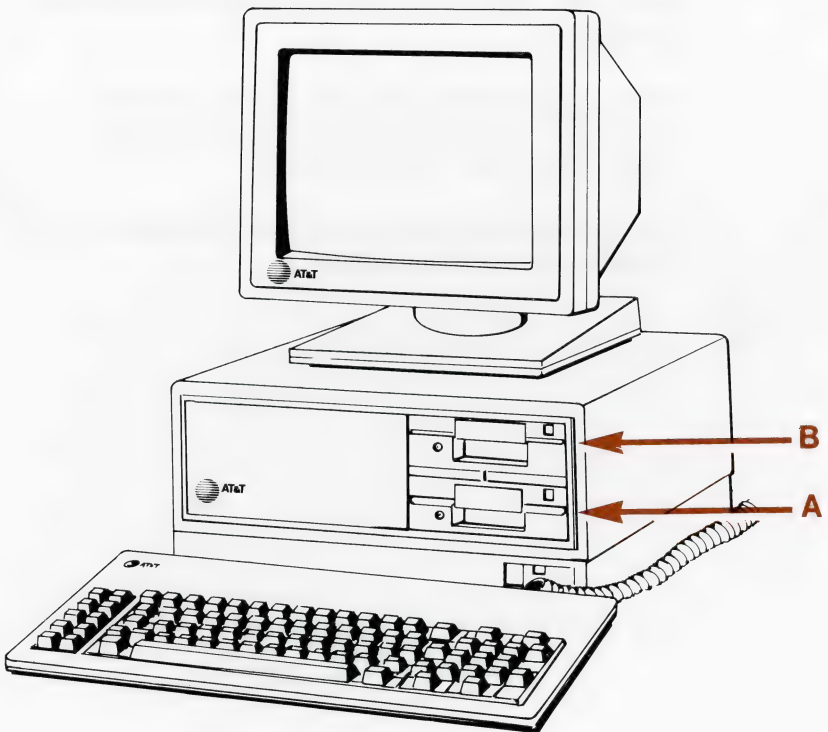
If You Have a Fixed Disk Drive and a Diskette Drive System

A fixed disk is treated just like a diskette for most of the MS-DOS commands. Like a diskette, a fixed disk has a drive designation letter. You can read and write data from and to it. A fixed disk can hold millions of characters of information and can retrieve data much faster than data can be retrieved from a diskette drive.

Some MS-DOS commands are used only with a fixed disk drive. These are covered in Chapter 5, MS-DOS Commands.

When you are copying the contents of a diskette to a fixed disk, the diskette drive is identified as drive A and the fixed disk is called drive C.

More information about setting up a fixed disk drive is found at the end of this chapter.

Files

Information is stored in files on your diskettes or fixed disk. A computer file is like a file folder in a conventional filing cabinet. It contains related data on a specific subject.

Every file has its own name called a "filename." MS-DOS uses filenames to locate stored files.
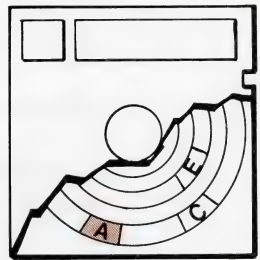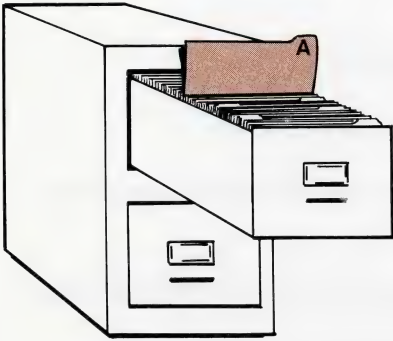
Naming files

Each file on a diskette must have its own unique file-
name. This way your computer can find the file you
want.

You **can** use the same filename on two different disk-
ettes or a fixed disk, but this may lead to problems
later when you are COPYing a file from one disk to
another.

A file's name is composed of:

- a **filename** of one to eight characters

- an **extension** of one to three characters (an extension
  is an optional identifier)

- a **period**, required as separator if an extension is used.

Legal characters in a filename and extension are:

- letters of the alphabet

- numbers 0 through 9

- these special characters:
  $ # & @ ! % ( ) - { ' ` ~ ^ _ }

NOTE: Spaces between characters are not allowed.

Examples of legal filenames are:

PHDTHSIS.78
MOM&SIS.LTR
$$TAXES$.83
CH3PART1
##4^.!!!

Although the last filename on this list is legitimate, it doesn't give you much information about the contents of the file. A good filename reminds you what information is in the file.

To see what files are on a diskette, use the MS-DOS DIR command. Files are displayed on the screen similarly to this:

```
FC          EXE    2585    4-12-84    9:00α
FDISK       COM    4640    4-12-84    9:00α
FIND        EXE    6331    4-12-84    9:00α
FORMAT      COM    5776    4-12-84    9:00α
.
.
.

RESTORE     COM    4043    4-12-84    9:00α
        33 File(s)           150528 bytes free

A>
```

This list of files will become very familiar. You see this list on your screen every time you enter a DIR command for an MS-DOS Systems diskette.

The files on the MS-DOS Systems diskette are the programs that control your computer and perform important "housekeeping" tasks on your diskettes and files. Files on your diskettes contain many different types of information. There are simple text and data files — files that contain information that you create with a word processing or spreadsheet program. Other kinds of files are program files. These contain the instructions used by your computer to perform a task or complex operation. These are created using a programming language such as BASIC or Pascal — or other, specialized languages — and are meant to be used by a computer, rather than read by a person.

The files on your MS-DOS System diskette are program files.

This chart describes each of these MS-DOS Systems files and what they do.

File Name	Function of File
COMMAND.COM	MS-DOS command processor
EDLIN.COM	Line editor

DEBUG.COM	Debugger
LINK.EXE	Linker
CHKDSK.COM	Checks disks
FORMAT.COM	Formats disks
SYS.COM	Transfers system
DISKCOPY.COM	Backup utility
RECOVER.COM	Recovers disks
PRINT.COM	Print spooler
MORE.COM	Reviews text
SORT.EXE	Sorts text
FIND.EXE	Finds a string in a list of files or standard input
EXE2BIN.EXE	Converts .EXE files
CONFIG.SYS	System configuration file
RESTORE.EXE	Restores files
BACKUP.EXE	Backs up files

Even though the period is not displayed on the screen, you must use it when entering a filename and extension and when telling MS-DOS about that file.

Reserved Filenames and Extensions

Some filenames and extensions have a special meaning in MS-DOS. Some filenames identify the hardware parts of your computer or its accessories. Some extensions identify types of files handled in a special way by your computer.

Do not use the following reserved filenames when naming your own files.

Filename	Meaning
AUX	Refers to input or output to an auxiliary device — a printer or a modem
CON	Refers to keyboard input or displayed output
PRN	Refers to the printer
NUL	Used when you do not want to create a particular file, but requires an input or output filename.

The chart below shows some of the special file name
extensions that you may use from time to time to iden-
tify program files that are used by a computer to per-
form some operation. For example, if you write a batch
processing program that performs a series of MS-DOS
commands, you use the extension .BAT to tell MS-DOS
how to handle the file whenever you want to run that
program.

Extension	Meaning
.COM	Command file - a program
.EXE	Command file - a program in binary format
.BAT	A batch program

Wild Card Characters

When you are using MS-DOS file commands, the wild card characters * and ? can speed things up, particularly when you are working with multiple files. These characters provide flexibility in making choices about filenames and extensions.

The ? character indicates that any valid character may occupy that position in a filename or extension. For example:

DIR INV???.84

lists all directory entries that begin with INV, have any three following characters, and end with the extension 84. For example, these files might be found:

INVENT.84
INV003.84
INVOIC.84

The * character in a filename or extension indicates that any valid character can be in that position, all remaining positions, or in the extension. For example:

DIR *.DAT

lists all the files with the extension .DAT. These files might be found:

84.DAT
INVENTRY.DAT
PAUL.DAT
Q184.DAT

The wild card characters * and ? can be used together or interchangeably. They are powerful tools and should be used **very carefully**, particularly when using the DELete or ERASE commands.

File Specifications

When you want to call up a file, you must tell MS-DOS where to search for it — that is, you must specify what drive contains the diskette with that file. Type in:

A>**MOM&SIS.LTR**

Here, you provided only the filename and extension. Therefore, MS-DOS searches the current A drive.

These three parts — the drive letter, the filename, and the extension — are called the file specification.

Often, you need to fetch a file from a drive other than the current drive. In these cases you need to specify the drive.
For example, to specify a file on the B drive with a current A drive, type:

A>**B: thisfile.onB**

If your hard disk is the current drive, you may specify a file on A by typing:

C>**A:thisfile.onA**

The drive letter and the colon are called the drive speci-fier. Always type the colon (:) after the drive letter. Do not put any spaces between the three parts.